

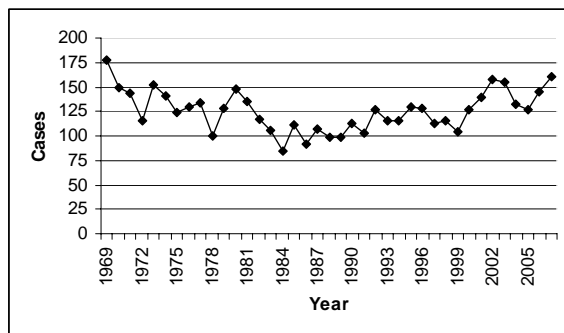


# WORLD TB DAY: MARCH 24, 2008

## TUBERCULOSIS IN KING COUNTY

In 2007, King County reported 161 cases of active tuberculosis (TB) disease, representing an 11% increase from the 2006 count and a 29% increase from the 2005 count (Figure 1). King County has not seen this number of cases in over thirty years. The rate of TB in King County for 2007 was 8.6 cases per every 100,000 individuals (Table 1); this rate remains higher than the national rate (4.4 per 100,000 in 2007).

FIGURE 1. TB CASES, KING COUNTY, 1969-2007



## AGE, RACE, AND ETHNICITY

The median age of TB cases in 2007 was 36 years. There were 13 pediatric cases (age 0-14 years), 11 of which were diagnosed through contact investigations (i.e., family members had active TB) and two were diagnosed soon after emigrating from their countries of birth.

TABLE 1. DEMOGRAPHICS, 2005-2007

	2005	2006	2007
<b>Cases</b>	<b>125</b>	<b>145</b>	<b>161</b>
<b>Rate/100,000</b>	<b>6.9</b>	<b>7.9</b>	<b>8.6</b>
	Count (%)	Count (%)	Count (%)
Gender-Male	78 (62)	88 (61)	99 (61)
Non-U.S.-born	95 (76)	116 (80)	122 (76)
Homeless	23 (18)	16 (11)	15 (9)

All non-white race and ethnicities continue to have disproportionately high rates of TB, e.g., blacks have a rate of 46.2 cases per 100,000 (Table 2). Black cases born outside the United States (US) made up 38 of the 51 (75%) black cases total in King County in 2007.

TABLE 2. RACE/ETHNICITY RATES, 2005-2007

	2005	2006	2007
<b>Rate/100,000</b>			
Race			
Am Indian or AK Native	17.2	17.2	22.9
Asian/PI	21.9	30.6	30.2
Black or African American	24.0	26.3	46.2
White	1.9	2.7	2.3
Ethnicity-Hispanic	9.1	16.1	17.0

## COUNTRY OF ORIGIN

In 2007, 76 percent of King County cases were born outside the United States. Of these 122 individuals, 70 (57%) came from five countries: Vietnam, Somalia, Ethiopia, India, and Marshall Islands.

TABLE 3. TRENDS IN COUNTRY OF ORIGIN, 2005-2007

Country	2005	2006	2007
	Count (%)	Count (%)	Count (%)
Vietnam	12 (13)	15 (13)	21 (17)
Somalia	8 (8)	8 (7)	17 (14)
Ethiopia	9 (10)	12 (10)	14 (11)
India	8 (8)	12 (10)	11 (9)
Marshall Islands	0 (0)	0 (0)	8 (7)

## OUTBREAK AMONG MARSHALL ISLANDERS

The TB Control Program investigated an outbreak of TB cases in the Marshallese community in King County. Since February 2007, there were 14 cases of TB in the Puget Sound area among families from the Marshall Islands. Eleven cases were diagnosed in King County; eight of the 11 King County cases were born in the Marshall Islands. With the utilization of a Marshallese Outreach Worker, 161 contacts were identified in King County, 143 of who underwent evaluation.

## TB-HUMAN IMMUNODEFICIENCY VIRUS CO-INFECTION

It is important to know the Human Immunodeficiency Virus (HIV) status of every TB case to provide the necessary complex medical care and to minimize morbidity and mortality. In 2007, HIV test results were obtained for 93% of cases. Among this group, nine TB cases were co-infected with HIV in King County, representing 6% of all TB cases. Nationwide 67% of cases have HIV test results with 7% infected.

## **HOMELESSNESS**

There were 15 cases of TB diagnosed among the homeless in 2007. The number of homeless cases has decreased since its peak during the homeless outbreak; 65 cases from 2002 through 2003. Cases associated with the homeless outbreak are still being seen in King County.

## **DRUG RESISTANT TB**

In 2007, 20 (12%) TB cases in King County were drug-resistant to at least one TB medication. Multi-drug resistant TB (MDR-TB), resistance to at least isoniazid and rifampin, is exceedingly costly and difficult to treat. King County reported two cases of MDR-TB in 2007. Three cases of MDR-TB were reported in 2006. Additionally, two cases of MDR-TB were diagnosed in other US health jurisdictions in 2007 and transferred to continue treatment in King County. In 2007, no cases of extreme-drug resistant TB (XDR-TB) were reported in King County.

## **TB TREATMENT**

No cases have been lost or refused to complete treatment. Of the 160 (one individual was diagnosed post mortem) cases in 2007 that began treatment, 71 (44%) have completed therapy. Treatment for TB, on average, takes six to nine months and can take 18 to 24 months or even longer for complex cases.

## **CONTACT INVESTIGATIONS**

Contact investigations were conducted for all individuals considered infectious. Over 750 household contacts were screened in 2007. In addition to household contact investigations, 18 worksite, school, and nursing/medical facility investigations were initiated. More than 350 contacts were identified at these sites, with over 80% of contacts evaluated. There were six additional investigations in congregate settings associated with homeless cases.

## **TB CONTROL PROGRAM**

The program continues to face many ongoing challenges. These challenges include a high proportion of TB patients who live under poverty thresholds, patients from diverse backgrounds, and the transient and migratory nature of many individuals at high risk for TB.

Due to the large pool of individuals with latent TB infection – an estimated 100,000 people in King County, and one third of the world's population – and the lack of convenient preventive medications or an effective TB vaccine, it is unlikely that TB will be eliminated in the near future. To manage this disease with the tools currently available, the King County TB Control Program focuses on three fundamental principals: (1) case management of patients with active TB disease in order to assure the cure of all TB cases, stop further transmission of TB and prevent development of multi-drug resistant TB; (2) timely and thorough contact investigations around active TB cases to identify, evaluate and treat those who were exposed and/or recently infected; and (3) collaborative efforts with a number of public health and community partners, particularly to enhance targeted TB testing and treatment of latent TB infection.

For more information:  
<http://www.metrokc.gov/health/tb/>